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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,775	08/07/2003	George Lange Paul	11848/9	1702

7590 07/29/2004

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Suite 700
1500 K Street, N.W.
Washington, DC 20005

EXAMINER

HA, NGUYEN T

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/635,775

Applicant(s)

PAUL ET AL.

Examiner

Nguyen T Ha

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 52-113 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 52-113 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0803.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 52-73 and 102-113 objected to because of the following informalities:

Claim 52, line 10, "FOM" unclear. What does FOM stand for?

Claim 64, line 11, "FOM" unclear. What does FOM stand for?

Claim 102, line 10, "FOM" unclear. What does FOM stand for?

Appropriate correction is required.

Allowable Subject Matter

2. Claims 52-113 are allowed.

The following is an examiner's statement of reasons for allowance:

With respect to claims 52-63 and 85-92, the prior art alone or in combination does not teach the limitation of a charge storage device comprising a charge storage cell having the volumetric FOM of the device being greater than about 3.2 Watts/cm³ or greater than about 35 Watts/cm³, and the maximum operating voltage of the cell being less than about 4 Volts.

With respect to claims 64-73, the prior art alone or in combination does not teach the limitation of a charge storage device comprising a charge storage cell including: a first electrode having a first layer including a carbon having a surface area greater than 400 m²/gram, a second electrode having a second layer including a carbon having a surface area greater than 400 m²/gram opposed and spaced apart within a sealed package, wherein the volumetric FOM of the device being greater than about 1.1 Watts/cm³ and the maximum operating voltage of the cell being less than about 4 Volts.

With respect to claims 74-84 and 102-113, the prior art alone or in combination does not teach the limitation of a charge storage device comprising a charge storage cell having the gravimetric power maximum of the device being greater than about 12.5 Watts/gram or greater than about 2.1 Watts/gram, and the maximum operating voltage of the cell being less than about 4 Volts.

With respect to claims 93-101, the prior art alone or in combination does not teach the limitation of a charge storage device comprising a charge storage cell including: a first electrode having a first layer including a carbon having a surface area greater than $400 \text{ m}^2/\text{gram}$, a second electrode having a second layer including a carbon having a surface area greater than $400 \text{ m}^2/\text{gram}$ opposed and spaced apart within a sealed package, wherein the gravimetric power maximum of the device being greater than about 4.8 Watts/gram and the maximum operating voltage of the cell being less than about 4 Volts.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Citation Relevant of Prior Art

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Shiue et al. disclose supercapacitor with high energy density.

- b. Maletin et al. disclose supercapacitor and a method of manufacturing such a supercapacitor.
- c. Amatucci discloses carbon fabric supercapacitor structure.
- d. Yen et al. disclose high energy density and high power density ultracapacitors and supercapacitors.
- e. von Alpen et al. disclose electrochemical storage cell.

Conclusion

4. This application is in condition for allowance except for the following formal matters:

Claim 52, line 10, "FOM" unclear. What does FOM stand for?

Claim 64, line 11, "FOM" unclear. What does FOM stand for?

Claim 102, line 10, "FOM" unclear. What does FOM stand for? The applicant has to amend the claims to overcome the objection in the above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.


A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T Ha whose telephone number is 571-272-1974. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nguyen T. Ha
July 20, 2004


DEAN A. REICHARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800
